

Amendments to the Claims:

This listing of claims will replace the prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 – 9 (cancelled)

10. (original): A cartridge cassette for use with an surgical irrigation pump having a pumping actuator, the cartridge cassette comprising:

a pumping chamber in fluid communication with a source of fluid and an irrigation conduit;

means for removably connecting the cartridge to the surgical irrigation pump to establish working communication with the pumping actuator;

an upstream valve disposed in the cartridge and in fluid communication with the source of fluid and the pumping chamber; and

a downstream valve disposed in the cartridge and in fluid communication with the irrigation conduit and the pumping chamber.

11. (original): The cartridge cassette of Claim 10, further including tubing assembly means for interconnecting the cartridge cassette and the source of fluid.

12. (original): The cartridge cassette of Claim 10, further wherein the upstream and downstream valves are a spring biased poppet valve disposed adjacent the inlet port and a spring biased poppet valve disposed adjacent the outlet port.

13. (original): The cartridge cassette of Claim 10, wherein the means for removably connecting the cartridge cassette to the surgical irrigation pump includes a tab-receiving recess connected with a tab-receiving groove in the cartridge cassette which is adapted to mate with a laterally outwardly projecting tab on the surgical irrigation pump to provide coupling of the cartridge cassette in the surgical irrigation pump.

14. (original): The cartridge cassette of Claim 10, wherein the cartridge cassette includes a diaphragm.

15. (original): The cartridge cassette of Claim 14, wherein in the mated position of the cartridge cassette in the surgical irrigation pump, the diaphragm is preloaded.

16. (original): The cartridge cassette of Claim 14, wherein the diaphragm has a graduated cross-sectional thickness dimension such that the thickness dimension increases from a central portion of the diaphragm to radially outward portions of the diaphragm.

17. (original): A cartridge cassette for use with an surgical irrigation pump having a pumping actuator, the cartridge cassette comprising:

- a pumping chamber in fluid communication with a source of fluid and an irrigation conduit;

- a tab-receiving groove in the cartridge cassette which is adapted to mate with a laterally outwardly projecting tab on the surgical irrigation pump to provide coupling of the cartridge cassette in the surgical irrigation pump to establish working communication with the pumping actuator;

- an upstream valve disposed in the cartridge and in fluid communication with the source of fluid and the pumping chamber; and

- a downstream valve disposed in the cartridge and in fluid communication with the irrigation conduit and the pumping chamber.

18. (original): The cartridge cassette of Claim 17, further including tubing assembly means for interconnecting the cartridge cassette and the source of fluid.

19. (original): The cartridge cassette of Claim 17, further wherein the upstream valve is a spring biased poppet valve.

20. (original): The cartridge cassette of Claim 17, further wherein the downstream valve is a spring biased poppet valve.

21. (original): The cartridge cassette of Claim 17, wherein the cartridge cassette includes a diaphragm.

22. (original): The cartridge cassette of Claim 21, wherein in the mated position of the cartridge cassette in the socket, the diaphragm is preloaded.

23. (original): The cartridge cassette of Claim 21, wherein the diaphragm has a graduated cross-sectional thickness dimension such that the thickness dimension increases from a central portion of the diaphragm to radially outward portions of the diaphragm.

24. (original): A cartridge cassette adapted to mate with a surgical irrigation pump to provide coupling of the cartridge cassette in the surgical irrigation pump to establish working communication with a pumping actuator, the cartridge cassette comprising:

- a pumping chamber;

- a flexible diaphragm covering the pumping chamber;

- an upstream valve disposed in the cartridge adapted for fluid communication with a source of fluid and the pumping chamber; and

- a downstream valve disposed in the cartridge adapted for fluid communication with an irrigation conduit and the pumping chamber.

25. (original): The cartridge cassette of Claim 24, further including tubing assembly means for interconnecting the cartridge cassette and the source of fluid.

26. (original) The cartridge cassette of Claim 24, further wherein the upstream valve is a spring biased poppet valve.

27. (original): The cartridge cassette of Claim 24, further wherein the downstream valve is a spring biased poppet valve.

28. (original): The cartridge cassette of Claim 24, wherein in the mated position of the cartridge cassette in the surgical irrigation pump, the diaphragm is preloaded.

29. (original): The cartridge cassette of Claim 24, wherein the diaphragm has a graduated cross-sectional thickness dimension such that the thickness dimension increases from a central portion of the diaphragm to radially outward portions of the diaphragm.

Claims 30 -57 (canceled)